

1: Sectors and (sub-)uses: Please specify the sectors and (sub-)uses to which your comment applies according to the sectors and (sub-)uses identified in the Annex XV restriction report (Table 9). If your comment applies to several sectors and (sub-)uses, please make sure to specify all of them.

The responses in this Annex XV submittal refer to the Main Applications of Transportation and Safety (Annex E.2.11.) with **additional** sub-uses as per Table 9 as shown with asterisk*. Although this table is not inclusive of all sub-uses which more accurately reflect essential sub-uses.

Summary: Semiconductors are used throughout every aspect of our daily lives. Our products support the production of semiconductor devices by providing reliability in wafer level packaging, as dielectrics and as stress buffers. These products have been safely used for decades without direct human exposure by our customers and downstream customers. Semiconductor usage of PFAS-containing materials is controlled at the Business to Business (B to B) level throughout the supply chain. Every Customer is screened and approved prior to sale of product. No Resale of our products is permitted. Our products are not made for nor sold to consumers. Semiconductor manufacturers must adhere to stringent regulations in Industrial Use Only and all handling is in Clean Room environments. Air filtration, PPE, semiconductor grade purity restrictions and engineering controls protect both the worker and the quality of the product. The table in the Public Section illustrates the broad range of Applications and Sub-Uses in the Transportation and Safety areas that rely on our products and devices made with our products; acronyms used in Annex E.2.11 Table 9 are defined in the text below the table.

Main Applications	Sub-Uses	Sub-Uses	Sub-Uses	Sub-Uses	Sub-Uses	Sub-Uses	Sub-Uses
Transportation and Safety	Combustion Engine Systems	Electrical Engineering and Information Technology, *LIDAR *ADAS	Safety equipment (incl. fire prevention and protection) *Airbags, *Lane Change Sensors	HVACR systems	*EVs *Lithium-ion Batteries *Wired/Wireless Charger *Charging Stations	*Avionics	*Defense *Vehicles, *Wearables, *Communication *UAVs, *Lightweighting *Sensors *LIDAR

Transportation and Safety: Combustion Engine Systems, Electrical Engineering and Information Technology, (LIDAR) Light Detection and Ranging, (ADAS) Autonomous Driving and Sensor Systems, Safety Equipment, Fire Detection and Suppression Systems, Airbags, Lane Change Sensors, (HVAC) Heat, Ventilation and Air Conditioning Systems, (EVs) Electronic Vehicles, Lithium-Ion Batteries, Wired and Wireless Chargers and Charging Stations, Avionics, Defense Industry, Vehicles, Wearables for Warfighters, Communications (UAVs) Unmanned Aerial Vehicles, Drones, Lightweighting, Sensors

We are aware that many trade associations representing the aerospace, automotive, transportation, electronics and semiconductor industries intend to advocate for removal of fluoropolymers from the scope of the restriction proposal. We would endorse that proposal because it aligns with our understanding of the following: 1) the socioeconomic benefits of the use of polymeric PFAS in essential applications far outweighs the risks, 2) polymeric PFAS can be fully mineralized by incineration, and 3) polymeric PFAS are not toxic and do not bioaccumulate. Our submission below is not intended to detract from such arguments but to support and provide additional information.

PFAS-containing products have been used in devices in permanent application spaces that cannot be re-engineered. The finished designs were completed years ago, many of which are now used for replacement parts for automotive electronic components, lane change indicators, airbags and power device electronic components. The original designs, test equipment, laboratories and engineering personnel that created these devices may no longer exist. Only the replacement components are available. This would mean a complete reinvention of legacy electronic systems and devices would be required. This would lead to unnecessary supply shortages of critical replacement parts such as automotive chips and sensors plus discarding entire automotive, avionic and military systems which is unsustainable and of government security concern.

Referenced report from ACEA (European Automobile Manufacturers' Association) regarding potential consequences of a PFAS restriction to the Semiconductor industry.

Public References:

Impact of a Potential PFAS Restriction on the Semiconductor Sector, Report No. 2022-0737 REV.9, April 13, 2023; ACEA (European Automobile Manufacturers' Association) Submission, ACEA Comments on the Annex XV Dossier of the Universal PFAS Restriction Proposal, May 2023